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LEADING ARTICLES

Academic and Professional Freedom page 379 Oral Contraception and Depression page 380 Urinary Symptoms in General Practice page 381 Treatment with Neutrons page 381 Psychogenic Dyspnoea page 382 Immunological Aspects of Addison's Disease page 382 Anaesthesia in the Dark page 383 Actinic Reticuloid page 384 Invasion of Privacy page 384

	and the control of th
PAPERS AND ORIGINALS	MAL THE PROPERTY LIBRARY
Medical Education and the State RONALD V. CHRISTIE	
Epidemiology of Urinary Tract Diseases in General Pract	ice
J. STEENSBERG, E. D. BARTELS, H. BAY-NIELSEN, E. FANØE, AND T. I Feto-maternal Haemorrhage in Therapeutic Abortion	J. C. VOIGT AND R. P. BRITT
Insulin Sensitivity and Vascular Disease in Maturity-onset	
Mechanism of Action of β -Adrenergic Receptor Blocking A Propranolol with Dexpropranolol and Practolol A. G.	Agents in Angina Pectoris: Comparison of Action of WILSON, O. G. BROOKE, H. J. LLOYD, AND B. F. ROBINSON 399
Association of Hypokalaemia and Hypophosphataemia	D. C. ANDERSON, T. J. PETERS AND W. K. STEWART
Involuntary Movements in Patients Taking Oral Contrace	
Active Immunotherapy in Treatment of Acute Leukaemia	
MEDICAL MEMORANDA Transient Hypertension Caused by Segmental Renal Arter	y Occlusion 408
MIDDLE ARTICLES	CURRENT PRACTICE
Cogwheel: A Physician's View of a Local Version	Migraine ALICK ELITHORN 411
JAMES S. STEWART	Spinal Injuries and Fractures J. ASHWORTH 414 Any Questions?
A Survey of the Accompanying Letters, with	Any Questions: 415
Recommendations P. K. BARNES AND R. W. HOILE 424	CORRESPONDENCE 427
Personal View C. R. B. JOYCE 426	
BOOK REVIEWS 417	OBITUARY NOTICES 436
NEWS AND NOTES	SUPPLEMENT
Parliament	Hospital Junior Staffs Group Council37
Epidemiology	Safeguarding Junior Staffs' Interests: Chairman of
Medico-Legal	Council's Letter
Medical News	Occupational Health Committee

Correspondence

Letters to the Editor should not exceed 500 words.

Computers on the March
M. P. McBrien, F.R.C.S.; R. de Soldenhoff,
B.SC427
Mobile Coronary Care Teams
A. A. Jennifer Adgey, M.R.C.P., and S. A.
Zaidi, M.R.C.P.I427
Car Driving and the Heart
G. Wiseman, M.D.; H. Franks, D.P.H428
Treating Preinfected Wounds
J. A. Raeburn, M.B.; P. J. Whitfield, B.A.;
A. G. Zermansky428
Renal Transplantation and Leucocyte
Migration
W. J. Dempster, F.R.C.S428
Vaccination against Whooping-cough
F. T. Perkins, Ph.D429
Acetate and Bacteria
I. Kennedy, M.B430
Saving the Grossly Disabled
R. C. Sanders, M.R.C.P430
Purpura and Ibuprofen
T. Ward, D.C.H
2

Career Prospects for Medically Qualified
Dentists
F. G. Hardman, M.B., F.D.S. R.C.S430
Agricultural Accidents
R. M. Archibald, D.I.H
Fibrinolytic Enzyme System
J. Bonnar, M.R.C.O.G., and others430
Analgesic Nephropathy
D. Bell, M.B., and others431
Malignant Granuloma
I. Friedmann, F.C.PATH., and D. A. Osborn,
F.C.PATH431
Battered Babies
B. Barnett, D.P.M432
Metabolism in Parkinsonian Patients
J. Braham, M.D., and A. Szeinberg, PH.D. 432
Survival after 195 Defibrillations
M. M. Kubik, M.D., and P. K. Das Gupta,
M.R.C.P.ED432
Methoxyflurane for Obstetric Analgesia
M. Rosen, F.F.A. R.C.S., and others432
Clinical Data and Statistical Interpretation
J. S. Price, D.P.M433

Inappropriate Lactation
R. P. Shearman, F.R.C.O.G433
Congenital Anomalies of the Vas Deferens
G. T. Watt, F.R.C.S433
Unwanted Blessings
P. H. Addison, M.R.C.S433
Solitary Confinement
R. I. K. Blyth, M.R.C.S
The Consultant's Job
D. St. C. L. Henderson, F.R.C.S.ED., and
others; M. Hamilton, F.R.C.P., and others 434
Regional Hospital Medical Staff
G. G. Muir, M.D435
Specialist Registration and the Armed Forces
Surgeon Commander G. A. R. Giri,
D.P.H
Postgraduate Courses and Seniority H. G. Gibson, M.B435
Fees for Expert Witnesses
G F Petty M B C S
G. F. Petty, M.R.C.S
Sir Thomas Holmas Sellors, P.R.C.S435
on Thomas Homes Schols, P.R.C.S435

Computers on the March

SIR,—Your leading article "Computers on the March" (18 October, p. 124) highlights only a few of the problems of introducing computers into medicine. Dr. J. H. Mitchell (18 October, p. 157) underlines two basic difficulties, which I believe will prevent the computer from intruding further into the clinical field.

Firstly, the history obtained from most patients in a busy outpatient department or ward is likely to be put together in a somewhat disjointed fashion; this depends on the mutual concentration, interest, and experience of the doctor on the one hand and the ability to communicate, the actual illness, and the state of mental anxiety of the patient on the other. The resulting data are bound to be "vague and unreliable," to quote Dr. Mitchell, and can never be suitable for computer input. Conversion of these human facts into "standard" questions and "standard" answers requires a vast increase in secretarial and programming personnel, a great deal of added "time per patient," and is plainly unworkable in the National Health Service.

Secondly, the record of examination of a patient can only contain certain parameters of objective assessment—for example, temperature, pulse, blood pressure—and these can be notoriously unreliable at a first interview. Other findings at a preliminary, and often cursory, examination are purely subjective, and depend considerably on the skill, experience, and individual variation among doctors. Such data are likewise unsuitable for programming a computer.

In certain areas of hospital work computers are invaluable, but in the strictly clinical field I feel that the only time that the medical profession will consent to using a common terminology of computer language will be when "standard" doctors are turned

out at the end of "standard" courses from "standard" medical schools, and when their patients stop being human.—I am, etc.,

M. P. McBrien.

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SIR,—After a rather tardy start the medical profession in Great Britain is seriously contemplating the use of computers in this the most conservative of professions. As Dr. M. Marinker points out there are several studies going on in general practice attempting to computerize records. A number of Scottish and English hospitals have tried to computerize small areas of their records.²

Dr. D. E. Clark's tells us that 75% of the activity of a hospital is concerned with the processing of information. Jydstrup and Gross' inform readers that the present cost of a hospital's information system or processing techniques is much higher than we appreciate, and may be as much as 25% of the total hospital operating budget.

It is indeed disappointing to see the article by Dr. J. H. Mitchell (18 October, p. 157), a distinguished expert on the processing of medical records, in which he condemns exciting research and investigation into this field as "fantastically elaborate and expensive." When the process of recording and retrieval of information is of such importance, then expensive schemes are valid. The storage of many patient/years of information is a simple and economical computer process, and destruction of records may well meet with condemnation from our successors in their studies or topics of interest and research into our diseases of the 60's and 70's. Our danger is not the diversion of attention from

more valuable uses to which computers might be put, but reluctance to spend time and effort on the resources at hand and to learn how to use them to their full efficiency.

—I am, etc.,

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 Kennedy, F., Roy, A. D., Cleary, J. J., and Kay, A. W., Lancet, 1968, 2, 1230.
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 Jydstrup, R. A., and Gross, M. J., Health Services Research, 1966, 1, 235.

Mobile Coronary Care Teams

SIR,—We believe that it would be singularly unfortunate if the concept of prehospital coronary care were to be judged by the results reported by Dr. H. A. Dewar and his colleagues (25 October, p. 226). The poor results obtained by the Newcastle unit, in contrast to the results obtained by the Belfast Mobile Coronary Care Unit, 1-4 are due to fundamental differences in the operation of the units.

In Belfast the emphasis is on early initiation of coronary care; thus the median time between onset of symptoms and the initiation of coronary care by the mobile unit is two hours, and 26% of the patients managed by the Belfast unit are under intensive care within one hour. In contrast, the mean time quoted by Dr. Dewar and his colleagues is four and a half hours. Since the majority of deaths from myocardial infarction occur within two hours of the onset of symptoms, the Newcastle unit will have little effect on the mortality. It appears that the general practitioners of Newcastle upon Tyne have been ill informed as to the type of patient who is most likely to benefit from immediate